

Ohio EPA

Division of Air Pollution Control

Engineering Guide #15

Question:

When an entity requests an average opacity determination for the purpose of establishing an equivalent visible particulate emission limitation for two or more identical, separately vented, processes or boilers at a facility, do stack tests and visible particulate emission readings have to be performed for each emissions unit? (This question was submitted by Dennis Bush of the Northeast District Office on April 22, 1980.)

Answer:

Normally, yes. Every separately vented emissions unit, for which an equivalent visible particulate emission limitation ("EVEL") is being requested, should be stack tested and have visible particulate emission readings performed as directed in Engineering Guide #13. The presumption should be that stack testing of each emissions unit is necessary to determine EVELs for multiple emissions units. To rebut this presumption, it is the responsibility of the owner/operator to provide compelling information to the Ohio EPA District Office/local air agency ("DO/LAA") to justify testing less than all of the emissions units for which EVELs are being requested.

There may be a few specific situations where the DO/LAA determines that stack testing of each emissions unit is not necessary. For instance, a DO/LAA might determine that a facility requesting EVELs for separately vented emissions units, which have identical designs and operating parameters, fuel, process materials, and control equipment do not require stack tests for each emissions unit. Adequate evidence for this determination could include consistent fuel quality, reliability of the emissions unit to continuously operate, and a wide margin of tested compliance. Thus, in rare situations, individual stack tests will not have to be performed for each identical emissions unit at a facility which desires EVELs. However, the Ohio EPA will require that visible particulate emission readings be performed for each identical emissions unit at the facility for which EVELs are being requested.

In general, the procedure for establishing EVELs for identical emissions units where it has been determined that stack testing each emissions unit is not necessary is as follows:

- (1) The owner or operator of the identical emissions units must request the Director of Ohio EPA to determine the average opacity of the emissions from each identical emissions unit during the stack tests for one or more of these emissions units.

- (2) Such request must be submitted to the Director of Ohio EPA at the time the test specifications and procedures are submitted (which is at least thirty days prior to the tests).
- (3) If the stack test specifications and procedures are acceptable, the EVEL for the emissions unit being stack tested should be determined in accordance with the procedures outlined in Engineering Guide #13. For the other identical emissions unit(s), the visible particulate emission readings should be taken while such emissions unit(s) is (are) operating at maximum capacity. However, these visible particulate emission readings do not have to be taken exactly at the time the stack tests are being conducted. (Note that for emissions units such as boilers with multiple cyclone control devices, visible particulate emission readings should be taken at normal capacity as well as at maximum capacity due to the generally lower collection efficiency of multiple cyclones at reduced loads.)

At a minimum, three 60-minute opacity observations should be taken on the untested emissions unit(s). Then, the EVEL(s) should be determined by the procedure outlined in Engineering Guide #13.

- (4) Once all of the EVELs are determined for the identical emissions units, the EVELs should be compared to the EVEL(s) of the tested emissions unit(s). If the EVEL(s) for the untested emissions unit(s) is (are) less than or equal to that of the tested emissions unit(s), then such EVEL(s) would be acceptable for the untested emissions unit(s). If the EVEL(s) for the untested emissions unit(s) is (are) greater than those for the tested emissions unit(s), then such emissions unit(s) should be stack tested and the average opacity determined during such tests.

For example, for three identical process emissions units (Units 1, 2 and 3), assume that stack tests at maximum capacity were performed on only Unit 1. The results indicate that this emissions unit is in compliance with the applicable mass emission limitation, but failed to comply with only the 60 percent opacity requirement in paragraph (A)(1)(b) of OAC rule 3745-17-07. The results of the EVEL determinations for all three units were as follows:

<u>Unit</u>	<u>Highest 6-Minute Average Opacity</u>
1	70%
2	80%
3	65%

The EVEL for Unit 3 was less than the EVEL for the stack tested unit; therefore, it would be acceptable. The EVELs for Units 1 and 3 could be established at 70 percent opacity and 65 percent opacity, respectively. On the other hand, the EVEL for Unit 2 would not be acceptable since the value exceeds the EVEL

obtained for Unit 1. Stack tests and additional visible particulate emission readings would be required for Unit 2 in order to establish an EVEL.

- (5) Lastly, if the owner's or operator's stack test report for the tested emissions unit(s) indicates that such emissions unit(s) is (are) in compliance with all applicable emission limitations, but failed to comply with the requirements of paragraph (A)(1)(a) and/or (A)(1)(b) of OAC rule 3745-17-07, then the entity must be notified by the Director of Ohio EPA that it may request the Director to establish an EVEL(s) for the stack tested emissions unit(s) as well as for any eligible untested emissions unit(s) which meet the criteria in item #4 above. Once such request is received from the entity, then the EVELs may be established.

Although it was the original intent of the Ohio EPA that the language in OAC rule 3745-17-07(C) require that stack tests and corresponding visible particulate emission readings be performed for each identical emissions unit in order to establish EVELs for multiple emissions units, the Ohio EPA Legal Section has rendered an opinion that the current language in this rule does not preclude this Agency from accepting something less than one stack test for each identical emissions unit at a facility. Upon presentation of compelling reasons, the Ohio EPA may accept a testing proposal where only one (or more) emissions unit(s) in a grouping of identical emissions units is stack tested for the purpose of establishing an EVEL for all such emissions units.

TK/JO/tk

July 15, 1980

(revised December 23, 1994 and June 20, 1997; reviewed on March 13, 2007 and no significant revisions were made)